



The Need Recognition in Marketing of the Tailor-Made Furniture and Personalization Process of the Product through Design Management

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Abstract: Small business furniture manufacturers in the age of digital media are changing the concepts of marketing and sales based on the strategy they recognize the user experiences. This creates a difference between industrial furniture manufacturers and traditional carpentry companies that produce tailor-made furniture. For our research, we examine the core question: "How successfully do small kitchen furniture manufacturers face strong competition in the market through a product personalization approach, considering user experiences and by practicing design management strategy?" With the support of the on-line marketing research, we did examine with 107 experienced customers, study their marketing need and user experiences of kitchen furniture in the concept of design management strategy.

Keywords: marketing need; tailor-made furniture; value proposition; personalization; user experiences; product design; design management.

JEL: M390

Prepoznavanje marketinške potrebe pri trženju po meri izdelanega pohištva in proces personalizacije izdelka s pomočjo vodenja oblikovanja

Povzetek: Izdelovalci pohištva za mala podjetja v dobi digitalnih medijev spreminjajo koncepte trženja in prodaje na podlagi strategije, ki jo prepoznajo pri uporabniških izkušnjah. To ustvarja razliko med proizvajalci industrijskega pohištva in tradicionalnimi mizarskimi podjetji, ki proizvajajo pohištvo po meri. Za našo raziskavo preučujemo temeljno vprašanje: "Kako uspešno se majhni proizvajalci kuhinjskega pohištva soočajo z močno konkurenco na trgu s pristopom personalizacije izdelkov, upoštevanjem uporabniških izkušenj in izvajanjem strategije dizajn managementa?" S podporo spletne trženjske raziskave bomo raziskali 120 izkušenih kupcev, preučili njihove tržne potrebe in uporabniške izkušnje kuhinjskega pohištva v konceptu strategije vodenja oblikovanja.

Ključne besede: marketinška potreba; pohištvo po meri; personalizacija; uporabniška izkušnja; dizajn izdelka; dizajn management.

1 Introduction

Small business furniture manufacturers in the age of digital media are changing rapidly the concepts of marketing and sales based on the strategy they recognize the user experiences. This creates a difference between

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industrial furniture manufacturers and traditional carpentry companies that produce tailor-made furniture service. For our research, we examine the core question: "How successfully do small kitchen furniture manufacturers face strong mass manufacturer competition in the market through a product personalization approach, considering user experiences and by practicing design management strategy?" With the support of the online marketing research, we accomplished a survey among 107 experienced end-users' customers, study their marketing needs and user experiences of kitchen furniture in the concept of design management strategy.

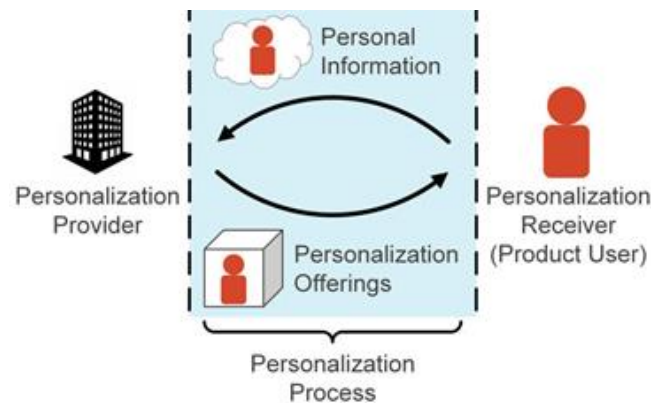


Figure 1: Concepts of personalization. Source: Kaneko et al., 2018.

Modern marketing processes dictate to small manufacturers producer's quick and unique responsiveness, especially in communication through digital media (Kay, 2019), where they intensively study user experiences and focus on personalized approaches and tailored products (Torn and Vaneker, 2019, 18). Marketing needs recognition is the first step in consumer/customer buying behaviour. The identification of the problem occurs when a consumer discovers an unmet need that has to be fulfilled. Every company and business should start to make an offer by knowing the consumer's interests, desires, and needs. The first step in the business is to analyse what consumers want and need, then try to sell to them and later follow-up a consumer/user experience. Research on market needs informs companies on what products to develop and design, for which customers, which sales channel, at what cost, what kind of service to offer, and consequently reduce the risks that a new product/service development always brings to them/market.

For many years, design management has been the intermediary between design as a strategic resource or as a driver of innovation and other business functions such as marketing, engineering, and product design (Borja de Mozota, 2003). Design and design thinking (Brown, 2008; Martin, 2009) is becoming a necessity for the survival of small businesses (Best, 2015) also in the wood-processing sector of kitchen manufacturing. Entrepreneurial concept and behaviour require the introduction of design thinking in the development of the new product process (Berginc, 2016). Design management encompasses the ongoing processes, business decisions, and strategies that enable innovation and create effectively designed products, services, communications, environments, and brands that enhance our quality of life and provide organizational success (DMI, 2009). It is interesting that design has been surprisingly absent from innovation studies because of a poor conceptualization of design as a creative economic activity in companies (Hobday, Boddington, and Grantham, 2011). Furthermore, in innovation studies, many disciplines such as management, economics, entrepreneurship, psychology, or sociology converge into one broader notion of innovation with many concepts overlapping and little dialogue amongst them (Cruickshank, 2010). A Design Management Absorption Model (DMAM) (Zahra and George, 2002) integrates several disciplines from innovation, strategic management, and design management studies. It offers a multidisciplinary view on a complex phenomenon such as organizational learning as well as embeds design and design management as distinct activities emphasizing the specific contribution design and design management can make to absorption and – ultimately to innovation processes. In previous research (Acklin, 2011) has made a conclusion that SMEs with little or no prior design knowledge are more able to cope with designers and the challenges of absorbing new design knowledge if they themselves build up the design management process and capabilities to successfully integrate the new knowledge that might diverge from their usual way of looking at their creative and innovative business solutions.

The design management strategy has proven to be an extremely effective model for recognizing the user experience (Borja, 2003) and personalizing the company's products in the last decade (Kootstra, 2009). On the sample of Slovenian companies, this practice was also recognized in KCDM project (KCDM, 2019) and confirmed the thesis that there are more innovative and successful companies which introduce a design management culture at all levels

of the company. Similar findings are made by the author (Fraser, 2009). Small businesses have to therefore choose a strategy for the introduction of personalized interior design services (Lindroos, 2016), by which can reach competitive level on the market. Design management facilitate processes, human-centeredness, visualisation, design-thinking, experimentation, prototyping, etc., and tools as well as tacit forms of knowledge such as design attitudes towards the creation of innovative solutions.

With pervasive connectivity of the Internet, personalization has become increasingly accepted for digital products. Authors (Mugge et al., 2009) define personalization as a process that defines or changes the appearance or functionality of a product to increase its personal relevance to an individual. As opposed to customization, which emphasizes on meetings explicit requirements of defined market segments, personalization aims at effectively observing and efficiently satisfying individual needs. If the product personalisation can provide a competitive advantage depends on how it is implemented in new products and to which target group of customers, it is aimed. By considering customers as individuals, implicit characteristics such as personal taste, traits, innate needs, and experience become important integral parts of product design. This new dimension for design opens up many new research issues. Design for mass personalization (DFMP) aims at effectively and efficiently satisfying customers as individuals by offering personally unique products with positive user experience. To this end, design is approached through the formulation of a product ecosystem based on a design platform and active customer participation (Tseng et al., 2010).

A company that facilitates design management, possess many benefits on the market. Such a company can improve the innovation process, customer experiences, makes the more stronger brand name, archive higher visibility, and can improve performance efficiency at all stages of the process. Finally, the company with a design management strategy is able to make a higher profit and reaches fast growth. Design-oriented companies stimulate culture of the design thinking system among employees. Design thinking is a human-centred approach to innovation that draws from the designer's toolkit to integrate the needs of people or marketing need, the possibilities of technology, and the requirements for business success (Brown, 2008). Design thinking is a process for practical, creative resolution of problems or issues that looks for improved and innovative future results.

Today, design management is becoming a commercial necessity, as it enables a company to successfully deploy design for innovation purposes, stay in line with the market needs, solve the problems of customers throughout personalization, and realize the benefit. When design management is an explicit part of management processes, it will have a greater impact on business performance and help secure a market position of the company for the long term (Berginc and Hrovatin, 2015). Design management has the capability to take on a more active role in companies in respect of entrepreneurial issues in companies as well in the new venture creation process.

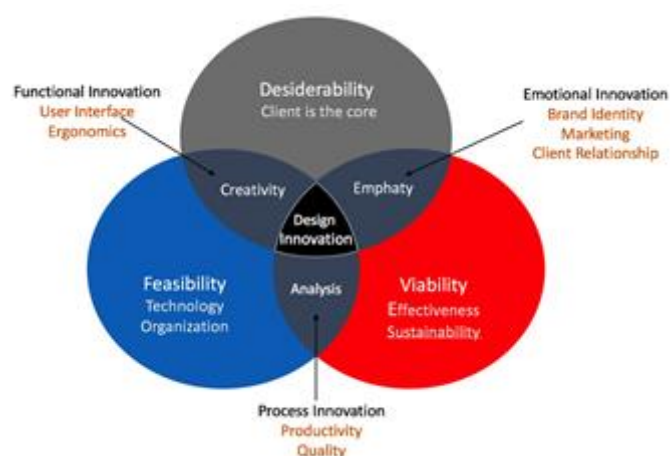


Figure 2: Design management process. Source: Ideo, 2008 modified by Stratego <https://designthinking.ideo.com/>

Hypothesis: Small traditional manufacturing companies are eager to drive personalization in conjunction with design management for innovative breakthroughs in recognizing the marketing need.

2 Methods

2.1 The design of selected paradigm and description of the instrument

As part of consulting project activities in the company Erjavec in Spring 2020, we accomplished a marketing research, which aim was to test and clarify the understanding of tailor-made furniture production and personalization marketing approach to the target group of potential customers who already had experience in purchasing kitchen furniture.

We choose "On-line" research method, which has many benefits, especially during the "Lockdown" period. The most important benefits are costs savings, fast delivery, the significantly better reach of the target group, reduced survey bias from "interviewer effect", convenience to the participant, faster results analysis and better results visualization.

The overall methodological approach chosen to accomplish this research was mainly qualitative and just partly quantitative for searching for general data. Qualitative methods present the possibility to work with multiple contexts for understanding, demonstrating, and comparing the phenomena under study focusing on the personalization process of customers. Then, to enable the development of a view of some aspects that cannot be understood in numerical terms and through various statistical analysis to allow room for flexible ways to perform data from questionnaires collection, analysis, and interpretation and to yield results that may help to develop new ways of defining and understanding the research topic problem. Quantitative methods were used in this paper, where possible to interpret qualitative data results.

2.2 Description of the instrument

As a research instrument, we have chosen a questionnaire of scales (Likert scale of five point) to obtain data of interest from the research subject. While designing a structure and the list of questions, we paid attention to the wording of questions, and secondly to the visual/interactive aspects of the questionnaire, not to be too complex, but rather easy to read and visually attractive. The average time to spend on fulfilling the questionnaire was exactly 12 minutes.

2.3 Sample description

The population that is accessible to this research study consists of all persons who were already clients of different furniture companies from Slovenia and had some experiences with purchasing kitchen furniture on the domestic market. We were targeting the mid and higher-class population between the 25- and 60-years old population.

2.3.1 Description of conducted research and data processing

The qualitative research method of the questionnaire is prepared as an on-line format with 24 questions and general information with an introduction letter. Most questions have a 5-point Likert scale answers option, and it is a proven scale for most of the research in social studies. A five-point scale increases the response rate. The midpoint, a "don't know" or a "neither agree nor disagree" is a perfectly valid response which means that in life lots of people do not know or do not understand or care about lots of things.

The database of clients was purchased from three sources: first, from a surveyed company database of potential customers of their mailing list, the second database from a local marketing agency which cares for the company campaigns, and third source of the database came from the company, which is trading with various of furniture on-line products. When the collected database was completed, the questionnaire with an introduction letter went to more than 700 e-mail addresses.

For the Internet survey, we have approached to 1KA system (www.1ka.si) which is an open-source application that enables services for online surveys which takes place at the Centre for Social Informatics, at the Faculty of Social Sciences, University of Ljubljana. 1KA software is based on SPSS.

Having discussed the methodological aspects of web-based research, we have to contemplate ethical aspects. Main points of ethical issues: approaching internet databases based on current privacy protection legislation; the anonymity of respondents; protection from harm; data security and the possible benefits to respondents, if they ask for the survey results which was mentioned in the cover letter. Personal anonymity may be central to gaining reliable answers. Throughout the survey, we never received one e-mail indicating disapproval or anger of making a posting through e-mail.

We compiled a survey questionnaire consisting of 24 questions related to the consumer attitude when the question is buying a new custom kitchen. We wanted to find out what is important to a potential buyer when decide to buy kitchen furniture, what kind of relationship and communication with the company and sellers they value and expect, what kind of service they appreciate in the concept of digital personalization.

At the first stage, it was accomplished a pilot study survey with 28 respondents to check the correct level of questions. After the first feed-back, we corrected only three questions to sound more logical and avoid potential answering dilemmas. The pilot questionnaire was sent out and distributed to three above mentioned databases in May 2020.

Finally, there was collected a core sample of 107 clients/customers in the control group who already practiced some consumer buying behaviour experiences with an interior design focus on kitchen furniture in June 2020.

2.3.2 The structure of questionnaire

The 24 survey questions were adapted to apply to the predicted scenarios that respondents would be answering about. We were interested to get their opinion on the next principles of consumer behaviour in tailor-made buying decision which partly concern design management capabilities: level of communication and interaction with the company, marketing need perception, level of personalization of service, evaluation the image of the brand, understanding innovation capabilities and design of the product, level of the field info-research of the furniture industry, specific topics concern tailor-made kitchen furniture offer.

3 Results

There were 101 respondents involved in the control group study for this evaluation. Out of 107, 6-questionnaires were drop-outs and eliminated because they were not answered in all set of questions.

Respondents made up 74% of the female and 26% of the male population. The least of respondents were from the age group between 20-30 years (13%) and the majority from the group between 40-50 years (34%). The rest were classified between 30-40 years (31%), and older than 50 years (22%).

49% of respondents defined a completed higher education or university program as education, 20% have a completed master's degree, and 23% have completed vocational or secondary school. The rest, 8%, possess a Ph.D. in science.

Most of the respondents 58% live in the city and urban environment. Slightly less than 42% come from rural areas, while the rest of the minority identified urban periphery as their place of residence.

Most important answers which concern this survey interpretation:

Title of the questionnaire: "Recognition of the marketing need of a tailor-made furniture manufacturer and personalization of the product".

Q2. "Kitchen and kitchen furniture with appliances represent a very important part of our household. We spend an important part of the day in the kitchen.

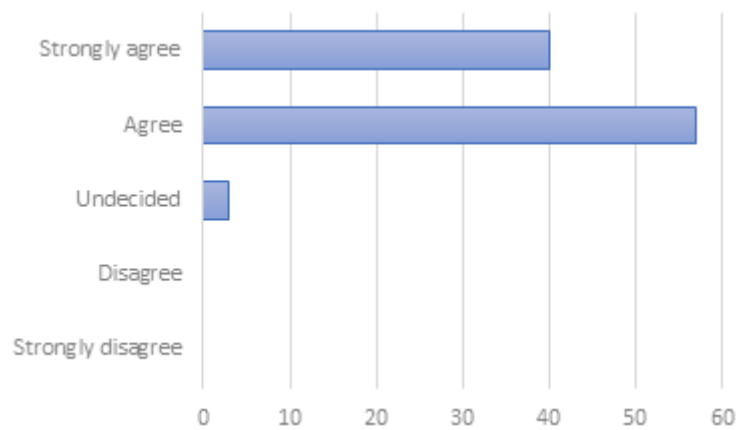


Figure 3: Kitchen and furniture with appliances represent a very important part of our household.

Most of the respondents agree that the kitchen and its furniture elements are a very important part of their everyday life, as they spend most of the day there cook and for family pleasure.

Q4. "After how many years do you think it makes sense and is necessary to replace kitchen furniture with the new one excluding the replacement of white technique - kitchen appliances?"

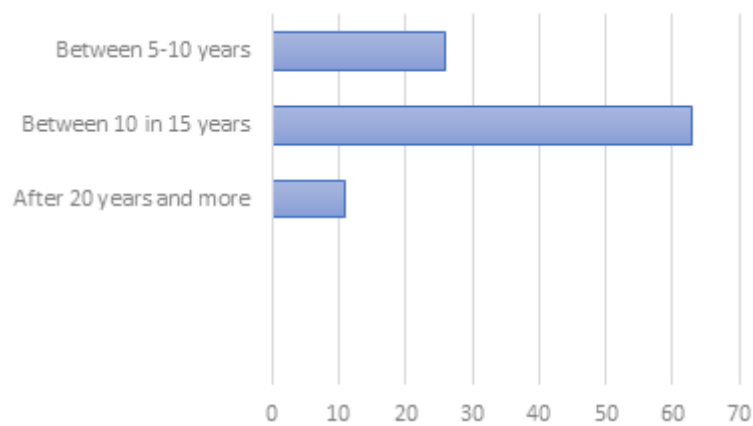


Figure 4: After how many years to replace a kitchen furniture.

A major part of the respondents defined that in their experience, kitchen furniture is changed in a period between 10-15 years, 26% defined those changes are made between 15 and 20 years, and a smaller proportion of 11% do so in a period of 5-10 years.

Q12. When planning a new kitchen and furniture, I have to use the expert advice of an interior designer or an architect so that there are as few mistakes as possible later.

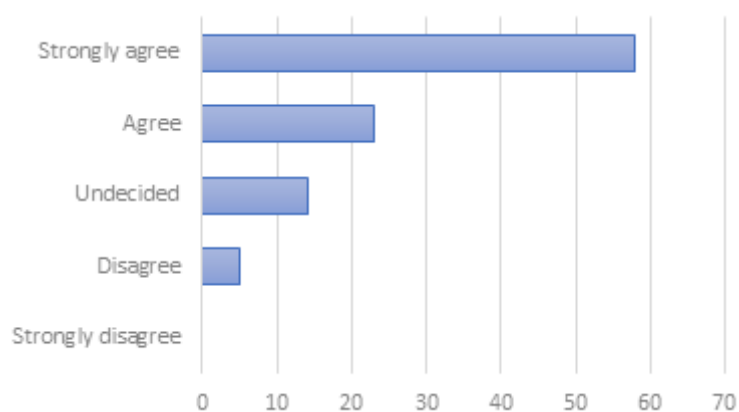


Figure 5: When planning a new kitchen and furniture, I have to use the expert advice of an interior designer or an architect.

Most of the respondents strongly agree that they should use the expert advice of an architect and an interior designer when planning a kitchen, as this is the only way they can protect themselves from possible later mistakes and extra costs. They want to learn from experts to avoid different risks.

Q17. "Personalized on-line digital interior and kitchen furnishing service offers you a professional interior designer with whom you can talk for an on-line interview and, based on reference images, prepare a conceptual 3D kitchen design and offer you a list of equipment you can buy or create a re-design solution on your existing kitchen elements. Do all this through an On-line profile designed just for you."

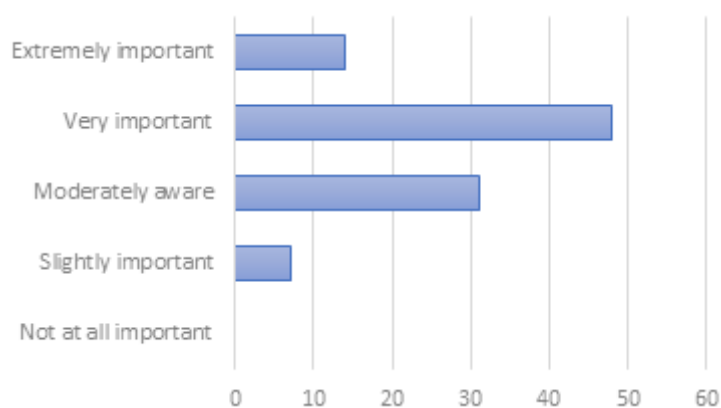


Figure 6: Personalization process of purchasing the kitchen furniture.

In this question, it was offered to respondents the opportunity to consider the option of using a personalized web application that would offer online consulting with a designer - who would only prepare 3D drawings and reference images for them to help choose a suitable and tailor-made kitchen.

More than half of the respondents described such a service as important or very important, so we can conclude that they would be happy to use it. Slightly more than 30% of respondents described this as something that was neither unimportant nor important to them, while 7% of respondents described the offer of such a service as slightly unimportant. The small manufacturer can invest lots of effort to spread the personalization approach to the individual customers and get better results than bigger trading companies which often have no resources to use the same approach.

Q21. "A traditional carpentry company should communicate more clearly, and design-thinking oriented with the entire market and customers with values that modern shopping malls do not have. Only in such an individual harmony with satisfied customers will their brand survive in the long run."

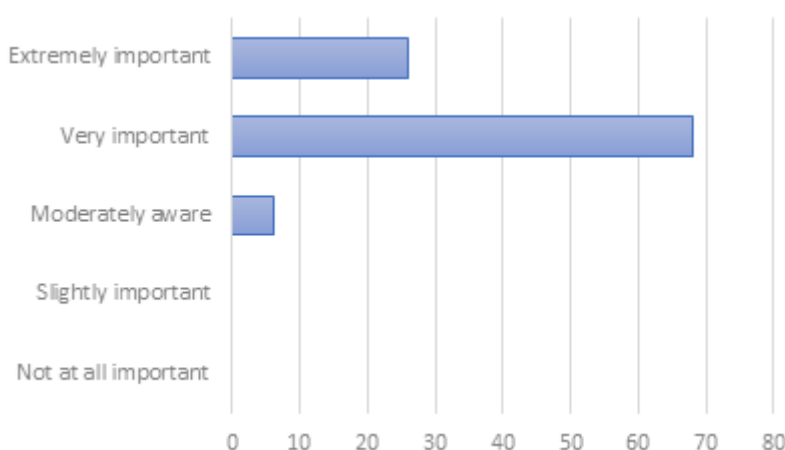


Figure 7: Design thinking orientation of traditional carpentry company

Most respondents agreed that companies that rely on their tradition in carpentry should be better promoted in the current saturated market by using trendy design thinking methods to evaluate user experiences in order to survive in the long run with a higher number of satisfied customers.

Table 1: List of the rest questions of survey which are not the part of interpretation.

No.	Q1	Q3	Q5	Q6	Q7	Q8	Q9	Q10	Q11	
Short description	Buyer who requires a tailor-made furniture	How design make impact on feelings	Experiences in buying furniture	Important criteria in buying furniture	Quality & price of tailor-made furniture	What the company should know about consumer	Have touch with top kitchen furniture	How tradition make impact on buying	How important is the material from Slovenia	
No.	Q 13	Q14	Q15	Q16	Q18	Q19	Q20	Q22	Q23	Q24
Short description	I visit first showroom	Primary I follow social media	Flexible options of financing	Top carpenter must be good paid	I request for personal adviser	Importance of user experience	Importance of post-service	Evaluation after delivery	Using demo-room for better choice	Within the family, who is a buyer

4 Discussion

As seen from our analysis, only continuous tailor-made content and traditional trendy designed values and personalization process truly increases the customers' commitment which results intention to collaborate with the certain company and brand name to purchase offering product. We define our hypotheses based on the relationship between recognition of marketing needs, personalization process, and design management activities. There exist no commonly applicable design methodologies for product personalization. The personalization is becoming the prime market driver for every company soon. More and more companies are aware of those capabilities they need to develop and digitize. In our survey hypotheses are only partly confirmed. The main reason is, that the company is not fully aware of the benefits that the design management strategy identifies in customer relationships. For this reason, a marketing need, and personalization are much stronger connected than design management activities which core issue is to experiment with the design thinking process and is just partly present in our survey. This insight supports the necessity of design management support programs to sensitize SMEs to design as a strategic resource/tool and a driver of innovation (Boult, 2006). A design management strategy opens a window of new opportunities for companies with little or no special design experiences.

In order to generate a sustainable and significantly increased purchase demand, customers have to be reminded of the existence of personalization features throughout continuous tailored communication and provide a special empathetic communication service. The purpose of personalization is to provide products that exactly fit the customer's need. Furthermore, the personalization process should be digitized creating and adding user interface features to a web site. Our analysis revealed that adding design personalization to a content-focused website has strongly positive effect on users' purchase intention.

5 Conclusions

Traditionally manufacturing and service industries have focused on technology, looking to generate benefits to give consumers not because they were needed but because it was market accepted and possible. Today, we are experiencing a fundamental shift from an era of mass consumption to a new era of context and personalization—the context economy. We are more intimate with technology than ever before (Green, 2007). Value is now designed personal, and consumer expectations are rapidly changing. Value is generated less through the selling and buying of goods and more through a personalized ecosystem of information, services, experiences, and solutions. Customer knowledge informed by an empathetic mindset is critical for creating relevant new offers that are both pertinent and differentiated, with design thinking popularized as the methodology to meet a marketing need and user experiences to become rising challenge.

From the findings of our research, we can generalize that small traditional furniture manufacturer need to convert marketing and business model to digitize personalization of the marketing and sales process. No matter that design thinking awareness is still on low level of practice, every such a company can start to experience it and consequently step by step introduce a design management model where it should become a part of corporate culture. They need to manage activities and proof that design “works”. They need to learn more on design management issues for the growth of the business. Design management can help to gain and sustain competitive advantage for each company. For this purpose, they need to collaborate with some external knowledge source that communicates the value of design, or participate at design promotion program, from designer, from a university, or some other sources of knowledge (Granovetter, 1973) of a firm’s network.

There is no evidence that similar research exists in comparison the same or similar factors and variables which embrace the marketing need, personalization with design thinking and design management phenomena. We propose to conceptualize design and design management as knowledge that first has to be learned either through the early integration of a design facilitator in the company or through an outsourcing design management service. The aim is to integrate design management method to a corporate culture. Finally, researchers of the same topics may relieve some of the burden of responding to individual enquiries by providing a page on their website with a detailed information of the study aims. It is hoped that the information provided here is of use to other researchers and may contribute to the development of valid, reliable, and ethical protocols for the use of the internet and new online analysis as a medium for research.

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